

What is claimed is:

1. A complex salt for an anti-spotting detergent, the complex salt being formed by the reaction of a photo-bleaching component having a water-soluble anionic substituent and a cationic surfactant.

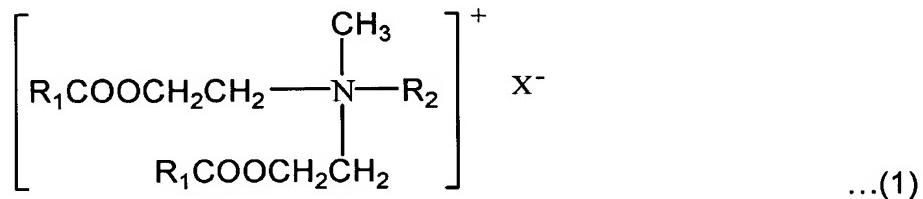
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2. The complex salt of claim 1, wherein the photo-bleaching component having the water-soluble substituent is a metallo porphrin, a metallo phthalocyanine, a metallo naphthalocyanine, or a combination of the forgoing materials.

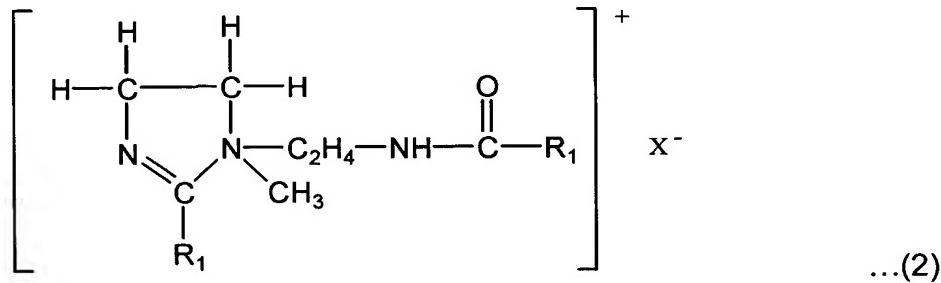
10 3. The complex salt of claim 2, wherein the metallo phthalocyanine is zinc phthalocyanine sulfonate or aluminum phthalocyanine sulfonate.

4. The complex salt of claim 1, wherein the cationic surfactant is a quaternary ammonium compound having one of formulae (1), (2), and (3) below:

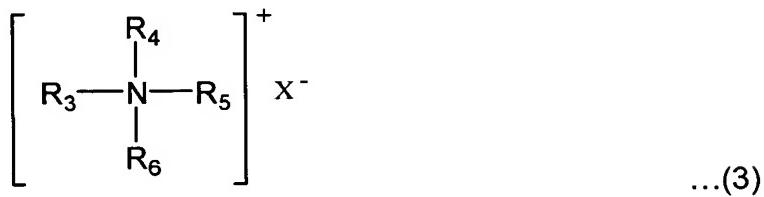
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wherein R₁ is a substituted or unsubstituted C₈-C₂₂ alkyl group or a substituted or unsubstituted C₈-C₂₂ alkenyl group; R₂ is a substituted or unsubstituted C₁-C₄ alkyl group; and X is selected from among a halogen atom, acetate, phosphate, nitrate, and methyl sulfate;



wherein R₁ is a substituted or unsubstituted C₈-C₂₂ alkyl group or a substituted or unsubstituted C₈-C₂₂ alkenyl group; and X is selected from among a halogen atom, acetate, phosphate, nitrate, and methyl sulfate; and



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wherein R₃ is selected from among a hydrogen atom, a substituted or unsubstituted C₁-C₂₂ alkyl, and a substituted or unsubstituted C₁-C₂₂ alkenyl group; R₄ is one or a substituted or unsubstituted C₈-C₂₂ alkyl group and a substituted or unsubstituted C₈-C₂₂ alkenyl group; each of R₅ and R₆ is a C₁-C₄ alkyl group; and X is selected from among a halogen atom, acetate, phosphate, nitrate, and methyl sulfate.

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5. The complex salt of claim 4, wherein the cationic surfactant of said formula (2) is selected from the group consisting of
15 1-methyl-1-[(steroylamido)ethyl]-2-octadecyl-4,5-dihydroimidazolinium chloride,
1-methyl-1-[(oleylamino)ethyl]-2-oleyl-4,5-dihydroimidazolinium methyl sulfate,
1-methyl-1-[(tallowamido)ethyl]-2-tallow-4,5-imidazolinium chloride,
1-methyl-1-[(palmitoylamido)ethyl]-2-octadecyl-4,5-dihydroimidazolinium chloride,
1-methyl-1-[(steroylamine)ethyl]-2-octadecyl-4,5-dihydroimidazolinium chloride, and
20 1-methyl-1-[(hydrogenated tallowamido)ethyl]-2-hydrogenerated
tallow-4,5-imidazolinium chloride.

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6. The complex salt of claim 4, wherein the cationic surfactant of said formula (3) is selected from the group consisting of tallow trimethyl ammonium chloride, ditallow dimethyl ammonium chloride, ditallow dimethyl ammonium methyl sulfate, dihexadecyl diethyl ammonium chloride, di(hydrogenated tallow)dimethyl ammonium chloride, dioctadecyl dimethyl ammonium chloride, distearyl dimethyl ammonium chloride, dicosyl dimethyl ammonium chloride, didocosyl dimethyl ammonium chloride, di(hydrogenated tallow)dimethyl ammonium methyl sulfate, dihexadecyl diethyl ammonium chloride, dihexadecyl dimethyl ammonium acetate,

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ditallow dipropyl ammonium phosphite, ditallow dimethyl ammonium nitrate, and di(coconut-alkyl)dimethyl ammonium chloride.